

2. PHILOSOPHY

At the Laboratory for Atmospheres, we support the well-being of the Laboratory's individual members, maintain strong ties with our scientific partners, and extend our reach to the wider community.

Individual Well-being

Personal Freedom

Individuals are free and encouraged to express their views and offer diverging opinions. Laboratory scientists submit research proposals with different technical or technological approaches and, in some cases, may even compete with one another. This freedom promotes creativity, competition, and openness.

Programmatic and Research Balance

Unlike most universities, our Laboratory often has relatively large programs, sizable satellite missions, or observational campaigns that require the cooperative and collaborative efforts of many scientists. We aim to ensure an appropriate balance between our scientists' responsibility for these large collaborative projects and their need for an active individual research agenda. This balance allows members of the Laboratory to continuously improve their scientific credentials.

Research Quality

The Laboratory places high importance on promoting and measuring quality in its scientific research. We strive to assure high quality through peer-review funding processes that support approximately 90% of the work in the Laboratory. The overall quality of our scientific efforts is evaluated periodically by committees of advisors from the external scientific community, as detailed in Appendix 2 of this document.

Scientific Partnerships

Synergy Between Science and Technology

The Laboratory aims to increase its interaction with the Systems, Technology, and Advanced Concepts (STAAC) Directorate and the Applied Engineering and Technology (AETD) Directorate through the formation of joint teams to develop new technologies and engineering solutions for scientific questions.

Goddard offers enormous opportunities for synergy between engineering and scientific expertise. Experimental activities are spread across the Laboratory to foster communication and to maximize the direct application of technology to scientific goals. In addition, a major effort is underway to increase our interactions with engineering groups outside the Laboratory. Healthy collaboration between our scientists and the Center's engineers is vital to our success in the competitive research environment in which we operate.

Interactions with Other Scientific Groups

The Laboratory depends on collaboration with the academic community, with other NASA centers and federal laboratories, and with foreign agencies to achieve its goals. Section 5 discusses these relationships more fully.

Support for Project Scientists

Space flight missions at NASA depend on cooperation between two upper-level managers, the project scientist and the project manager, who are the principal leaders of the project.

The project scientist must provide continuous scientific guidance to the project manager while simultaneously leading a science team and acting as the interface between the project and the scientific community at large. Taking on the responsibilities of a project scientist provides a unique opportunity for Laboratory staff to obtain significant scientific management experience. Typically, the Laboratory invites candidates from the senior ranks to fill these roles.

Outreach and Education

Members of the Laboratory interact with the general public to support a wide range of interests in the atmospheric sciences.

Among other activities, the Laboratory raises the public's awareness of atmospheric science by presenting public lectures and demonstrations, by making scientific data available to wide audiences, by teaching, and by mentoring students and teachers.

Section 7 presents details of the Laboratory's outreach activities during 1999.

Human Resources

The Laboratory is committed to addressing the demographic imbalances that exist today in the atmospheric and space sciences. We must address these imbalances for our field to enjoy the full benefit of all the nation's talent. To this end, the Laboratory always seeks qualified women and underrepresented ethnic groups when hiring new scientists and technologists. The Laboratory will continue to make substantial efforts to attract new scientists to the fields of atmospheric and space sciences.

Opportunities for the Commercial Sector

The Laboratory fully supports government/industry partnerships, Small Business Innovative Research (SBIR), and technology transfer activities. The Laboratory hopes to devote at least 10% to 20% of its resources to joint activities with industry on a continuing basis.